

Appl. No. 09/706,937

Amdt. dated September 29, 2009

Request for continued examination after final office action of May 29, 2009

REMARKS

This amendment accompanies the filing of a REQUEST FOR CONTINUED EXAMINATION following the final Office Action mailed on May 29, 2009. The Office Action rejected Claims 1-6 and 8-15 as obvious in view of the combination of U.S. Pat. No. 6,125,367 ("NA"), U.S. Pat. No. 4,873,513 ("Souls") and U.S. Pat. No. 5,121,326 ("Moroto").

Applicants have amended Claims 1-3, 8 and 14. No new matter has been added. Applicants respectfully request reconsideration of the pending claims in view of the following remarks. Applicants submit that all of the pending claims in the present application are allowable, as explained below.

Independent Claim 1

In the Office Action, Claim 1 was rejected as being obvious in view of a combination of three patent references. Of these references, only one – NA – has been cited for the teaching the indexing structure with a first dimension including latitude information, a second dimension including longitude information and a third dimension including rank information. (see Office Action, pages 3-5). However, NA does not teach the single index (k-d tree) structure with the first and second dimensions including latitude and longitude information and the third dimension including rank information.

NA does not teach searching the single index for map data; rather, NA teaches a set of two-dimension region indices for each scale searchable for map data within set ranges of latitude and longitude values. That is, NA teaches a plurality of regional two dimensional indices defining latitude and longitude for the 1-to-1,200,000 scale level, another set of regional indices for the 1-to-200,000 scale level, a further set of regional indices for the 1-to-100,000 scale level, another set of regional indices for the 1-to-50,000 scale level, a further set of regional indices for the 1-to-25,000 scale level, and another set of regional indices for the 1-to-5,000 scale level. (*see*: NA, column 3, lines 10-13; column 4, lines 36-38; FIGS. 2-8). When searching for map data, the NA system identifies the scale level, such as level 1, 2, 3, 4, 5, 6, 7, and then uses the set of two dimensional region indices defining latitude and longitude corresponding to the desired scale level to read the map data. (*see*: NA, column 3, lines 10-13; column 4, lines 36-38).

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The indices of NA are precisely the separate conventional indices for each level of scale described in the Applicant's specification as the prior art. For example, prior art indexing schemes use multiple separate two-dimensional indices specifying latitude and longitude to access map data having different display scales. The prior art is in contrast to the Applicants invention of a single multi-dimensional index that allows access to map data having multiple different display scales or ranks. (Applicants' Specification, page 10, lines 8-13; page 11, lines 16-21.)

Moreover, none of the other cited references teach the claim elements of the single index structure with the first and second dimensions include latitude and longitude information and the third dimension including rank information. Accordingly, Applicant believes that Claim 1 is not obvious in view of the combination of NA, Soultis and Moroto because none of these references show or suggest an element of the claim. Thus, Applicant submits that the rejection of Claim 1 should be withdrawn.

Independent Claim 2

Applicants' independent Claim 2 was rejected as being obvious over the combination of NA, Soultis and Moroto. Claim 2 recites a single index structure that includes two spatial dimensions defining a bounded area represented by a maximum latitude, a maximum longitude, a minimum latitude and a minimum longitude and a non-spatial third dimension defines scale information associated with said indexed geographic data. Claim 2 is allowable for the same reasons discussed above in conjunction with Claim 1.

Independent Claim 14

Applicants' independent Claim 14 recites a single indexing structure with a first dimension that includes latitude boundary information, a second dimension includes longitude boundary information, and a third dimension with rank information. Claim 14 is allowable for the same reasons discussed above in conjunction with Claim 1.

Dependent Claims 3-6, 8-13 and 15

Applicants' Claims 3-6, 8-13 and 15 are dependent claims that distinguish the cited references at least for the same reasons explained above in connection with their independent

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base claims. In addition, these claims recite further features and limitations that are neither disclosed nor suggested by these references.

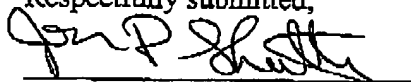
Petition for extension of time

Included with this response is a request for an extension of time to reply to the Office Action dated May 29, 2009. Included with this response is an authorization for payment of the fee associated with this request.

Conclusion

All the issues in the office action, dated May 29, 2009 have been addressed. Favorable consideration of the present application is requested. If any issues remain, the Examiner is invited to call the undersigned.

Respectfully submitted,



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